

L. Green, North Farmington.
Airdrie's Aylesby Lady, by Airdrie Duke
34340, dam 3d Aylesby Red Rose, by Grand
Red Rose 26740—Aylesby Lady—R. E.
Andrews, Milford.
Wild Rose 3d, by Hero 4th 43940, dam
Airdrie's Aylesby Lady, by Airdrie Duke
(Continued on Eighth Page)

The Horse.

SAME OLD STORY.

Palo Alto, by Electioneer, dam Dame Winnie, the thoroughbred race horse, was bred at Stockton, California, in the year 1860, and was the first of the breed to be imported into this country. He is only behind Mox y Cobb one half second, who has the best record, and except Axtell, he equals the record of Pallas. We know that Senator Stanford is great, and at the high speed made by Palo Alto. It has a theory that the fastest trotter, the American Eclipse, is not necessary to develop Palo Alto to prove this theory. But Senator Stanford should not forget that it is not only Electioneer's progeny that control the action of the thoroughbred, and this is the only lineage in which even he has been able to get a trotter out of a thoroughbred dam that could beat 2:30. Rural Home.

So Electioneer is the only trotting bred stallion "prepotent enough to control the action of the thoroughbred." Then Electioneer 3d (thoroughbred) must have been "prepotent" also, for he got Lady Suffolk out of a dam by the thoroughbred horse Don Quixote, a son of Imp. Messenger. And where will you get a gamier or better trotter than Lady Suffolk was? Mambrino Chief, by a thoroughbred horse, got Lady Taura out of a thoroughbred mare by Gano, a son of American Eclipse. He also got out of the same mare Mambrino Patchen, who was therefore three-quarters thoroughbred, the sire of 14 in the list, and of 21 horses who have since 1850 been, and of 24 dams who have produced in this state by the great Axtell 213. (By Wilkes 2:15 1/2, Hunt 2:19 Axtell 2:14.) Lots of thoroughbred blood there, and it did not require Electioneer to control it either to make game and fast trotters. All the sensational trotters of this season are full of running blood, and there would be little left of any of them if it were all eliminated.

SOME INQUIRIES ANSWERED.

To the Editor of the Michigan Farmer.

I noticed in your last issue the pedigree of Axtell is given as by William L. dam Lou by Mambrino Boy, second dam (said to be) by Mambrino Royal. Now is this all of his pedigree on the dam's side? And does the said Lou mean that the breeding of his second dam is in doubt? Is nothing known about his third dam?

How many of his get has Duke of Crawford 3087 in the 2:30 list? And what are their names and time made?

How many have Goldenbow and Louis Napoleon respectively in the 2:30 list?

If other or foreign blood is being introduced into the Percheron race of horses, as your Paris correspondent says, will you please explain how the register is worked? I notice all imported Percherons are numbered in the French book, and breeding given. Do you think the French Stud Book a fraud, and the registering there a farce? What about the Scotch and English Stud Books? Or, to come nearer home, do you think our American Trotting Register can be depended on as correct? INQUIRER, DAVENPORT, MICH.

What we published is all the pedigree of Axtell so far ascertained. His second dam, Bird Mitchell, is believed to have been sired by Mambrino Royal, and many give this as a fact in publishing Axtell's pedigree; but the Trotting Register says it is in doubt. Nothing has yet been published which gives any suggestion as to breeding of his third dam.

Duke of Crawford 3087, by Satellite 2500, dam Kory, by Sterling's Eclipse, has not as yet any produce in the 2:30 list.

Goldenbow 3435, by Satellite 2500, dam Romper, by Volunteer 55, has three trotters and one pacer in the list. They are as follows: Golden Girl, 2:23 1/2; Jim Fuller, 2:29 1/2; Octavia, 2:29 1/2; Golden Prince, pacer, 2:18 1/2.

Louis Napoleon 397, by Volunteer 55, dam Hattie Wood by Harry Clay 45, has seven in this list, one a pacer, namely: Charles Hilton, 2:17 1/2; Jordon Eddy, 2:16 1/2; Louis R., 2:36 1/2; Myrtle, 2:33 1/2; Rano DeLancey, 2:29 1/2; Spinella, 2:24 1/2; Bonson H., pacer, 2:27. Also sire of Frank Nolo who has one in the list, Harry Noble, and sire of the dams of Cora Belle, 2:29 1/2; Kate Rowell, 2:29 1/2; Calmes E., pacer, 2:17 1/2; Woodmont, pacer, 2:23 1/2.

The report of our Paris correspondent on the horses at the Paris Exposition can be relied upon. It is well posted on the various breeds of French horses, and knows what he is writing about. The French Percheron Stud Book was only begun a few years ago. Up to that time French breeders only looked after the breeding of the stallions they used, and can therefore give four or five of the sires in a pedigree, and perhaps two or three of the mares. There the pedigree ends, and anything beyond depends upon the memory of the breeder, and sometimes upon the society to have his horse bring a good price. In this respect the French Stud Book is in precisely the same position as the American Trotting Register, as for years the breeders of trotters did not have a Register in which they could record the breeding of their animals. The first volume of the Register was issued in 1871. But the Trotting Register is becoming more valuable every day, because breeders are more careful to preserve the history of their animals. You can be pretty sure that the breeding of an animal recorded in the Trotting Register is correct, but you must not expect the pedigree of a trotting horse to reach back as far as that of the thoroughbred, unless it runs into the latter—a large proportion of the best trotters do. But there are nearly always missing links on the dams, side beyond which all is mere conjecture. Fifty years from now the recorded pedigree of a trotting horse will be much more valuable than now, for it will contain a complete history on both sides of the breeding and performance of a long list of ancestors, giving the breeder an opportunity to study its value and make comparisons with others, and thus furnish him a guide in mating animals to produce certain results.

The English and Scotch draft stud books are also a recent creation. You can accept the breeding of animals entered in them as correct so far as they go. As a rule the breeders in Great Britain of all classes of

improved stock have adhered to a certain line of breeding from generation to generation, and while their animals have not been recorded so as to enable them to be traced back many crosses, except in the case of the thoroughbred horse and Shorthorn cattle, their system of breeding makes it pretty certain that beyond their published records the animals were bred in the same line and to the same type as at present. While draft horse stud books are not all they should be, they are improving every year, and it is far better to place reliance on them than to trust to the representations of interested individuals as to the breeding of non-recorded animals whose history must remain a complete blank.

Horse Gossip.

At the Grand Combination Sale F. M. Noble, of Wood Rapids, purchased the bay filly Lucille L., by Missouri Wilkes, dam by Missouri Clay.

Mr. J. H. LEATHERS, of this State, has purchased from B. Curry, of Lexington, Ky., a yearling filly by Nutwood, dam Mambrino Boy, the sire of Axtell's dam.

POCAHONTAS PRINCE, a stallion owned at Lexington, this State, won the 2:30 race at Lexington, Ky., last week, taking the second, sixth and seventh heats. Time of his heats, 2:27 1/2, 2:25 1/2, 2:25 1/2.

AMOS & ALFRED PHELPS, of Selo, have sold a span of four-year-old horses, sired by Regalia (owned by Phelps & Ball, of Dexter) to a Philadelphia party for \$800. This shows how well it pays to raise good stock.—Ann Arbor Courier.

ANNIE DICKINSON, the three-year-old filly purchased in this State by G. Williams, the breeder of Axtell, this season, and has since been trotted in a race 2:19 1/2, was sired by Luma 3223, a son of George Wilkes, and her dam was by George Wilkes. She cost Mr. Williams \$1,200, but she is worth three times that amount to-day.

The editor of the Kentucky Live Stock Journal is responsible for the following description of Axtell:

"We visited his stable to take a look at Axtell, and must confess we cannot, upon examination, say where he gets his wonderful speed and action. He is a plain bay with nothing striking about him. He has a plain head, with a star and slight blaze, well set on a good neck, well placed shoulder, good middle piece, with round rest and legs. His bones are curly looking, but seem to improve with age."

FLORIDA 482, by Hambletonian 10, dam by Volunteer 55, son of Hambletonian 10, is coming to the front as a sire. A daughter of his, Fortuna, out of a dam by George Wilkes, won the three-year-old stakes at Lexington very easily, the best time being 2:23. Fortuna has about as much of the blood of Hambletonian 10 as any animal on the track, and three direct crosses through sire, dam and granddam has not hurt her ability to trot fast. Freely, another filly by Florida, was second in the two-year-old stakes.

In the 2:30 race at Lexington, Ky., last week, two Michigan horses were entered, namely, Middleway, by Day Middleton, dam by Fick's Mambrino Chief, and Belle Rene, by Tremont, dam by George Wilkes. Sire beats were trotted. Middleway took the fifth heat in 2:29 1/2, was second in the seventh in 2:29 1/2, and third in the sixth in 2:25 1/2, a neck behind the second horse and a head behind the first. The stakes went to Poshontons Boy. Belle Rene was third in the last heat, which was the best position she got. Twelve horses started, and it was anybody's race till the last heat was trotted.

At Lexington, Ky., on October 18th, Roy Wilkes started in the free-for-all pace, his competitors being Pickaway and Bessmer. Roy was the favorite in the betting, as he had a right to be, but lost the two first heats, coming in last each time. Then Roy's backers began to kick, and called the attention of the judges to the manner in which George Hoken was driving him. They decided to take Robens out and put in E. Geers to drive the horse. Then Roy took the next three heats straight. The judges took the case under consideration, and finally fined both Robens and the owner of Roy, L. A. Davis, for attempted fraud. It is the opinion of many that they should have been expelled.

At the sale of trotting stock at Fairview Stock Farm, Kentucky, 254 head were sold for \$19,385, an average of \$75.48 per head. The following were purchased by Michigan buyers:

D-zile, bay mare, by Happy Medium, dam by Stanhope's Edwin Forrest, C. T. Lee, Dowest, price, \$25.
Stoic, bay colt, by Aberdeen, dam by Tom Stamps, J. H. Whitesides, Summit City, price, \$15.
Cattal Isle, weanling colt, by Noble Medium, dam by Knickerbocker, W. Anderson, T. Cushman, price, \$20.
Popularity, chestnut filly, by Eban Allen, Jr., dam by Starline, J. S. Dodge, Lansing, price, \$175.
Anemone, bay mare, by Aberdeen, dam by Fort Patchen, J. S. Dodge, Lansing, price, \$175.
Argyle, chestnut filly, by Jacinto, dam by Ashland Patchen, J. S. Dodge, Lansing, price, \$20.
Temptation, yearling bay filly, by Aleto, dam by Cuyler, J. S. Dodge, Lansing, price, \$20.
Strife, bay mare, by Ashland, dam by Hamlet, J. S. Dodge, Lansing, price, \$30.
Stratagem, bay weanling colt, by Almost Wilkes, dam by Ashland, J. S. Dodge, Lansing, price, \$20.
Morrietas, gray yearling colt, by Warden, dam by Aberdeen, John Gibson, Britton.
Mouletta, gray weanling filly, by Noble Medium, dam by Almost Lightning, J. S. Dodge, Lansing, price, \$27.
Donatree, bay weanling colt, by Aleto, dam by Balzora, Wm. Penman, Detroit, price, \$10.
A-line, bay weanling filly, by Aleto, dam by Aberdeen, A. Greig, Britton, price, \$20.
Chestnut weanling colt, by Maximo, dam by Magie, G. W. Phelps, Lansing, price, \$25.

The Farm.

Corn Culture.

Hon. M. T. Cole, of Palmyra, Lenawee Co., has a paper on the culture of our great American cereal at the "corn festival" of the Palmyra Grange. Mr. Cole said: "The farmer's best corn. How could we get along without it? All kinds of stock are fond of it. It's good for them, too. The stalks, or fodder, are relished by cattle, horses, and sheep, if properly cared for. Excepting in some of the western States, it is an extravagant waste to let corn stand until after haying. In many of the western States they begin to realize or discover that it pays well to shock their corn before husking. Those western cattle will rejoice and smile, if possible, when their stomachs are well filled with good corn fodder, to assist in procuring them against those blasting storms

of winter. Corn is by no means to be despised as an article for human food. In many ways it can be prepared by the skillful housewife and made very tempting for the table. We don't claim that corn is 'King,' but it's surely the foremost friend in almost every time of need.

Corn will grow well on most kinds of land, but it does love a dark rich soil. Don't plant low wet land with corn. It won't pay you. Drain it thoroughly, and it's just where corn will delight to grow.

Sod land, especially a clover sod, plowed about five inches deep, is a good beginning. If you will take the trouble to lay a board five inches wide on its edge in the furrow you will find that five inches is quite deep plowing. I would prefer four inches to six.

Coarse manure that accumulates in the barn yards during the winter months, should be drawn out, and thoroughly spread before plowing. I know many farmers save it for their wheat, but I prefer to put it on the corn and potato land. Pulverize the ground thoroughly before planting. When you think it's about right, go over it once or twice more. You can do it so much easier and nearer before planting. For sod I find the disc pulverizer about the right kind of a tool. You can so thoroughly cut the sod that it looks like a garden. If you have no disc harrow, roll down, and then drag thoroughly. That means several times. Every-one suits themselves about planting in hills or drills. You can raise more corn and fodder, though, in drills.

Harrow your ground a few days after planting. Then again just as it is sprouting out of the ground. If your land is neither too wet nor lumpy, harrow the third time, when the corn is about two inches high. You will probably cover up considerable of it, but it will be out again all right the next day. If you harrow after the leaves branch out, care must be taken or you will make serious holes in your crop, either by covering up or tearing out. Cultivate thoroughly until the ears are in silk. Later than this is liable to do more injury than good, especially if the season turns dry like this year.

Many farmers in Palmyra have learned by experience that commercial fertilizers are very beneficial to the corn crop. Most of them fertilize in the hill, either just before or right after planting. Care should be taken to cover the fertilizer with earth. This can readily be done with the foot.

I drilled eleven acres with Leaming corn this spring. One year ago the ground was manured and planted to potatoes. No coarse manure was used this spring. We used our grain drill, planting the corn four feet apart, that is, the rows. We used 'Himsted Superphosphate' at the rate of nearly 200 pounds to the acre, letting the superphosphate run in every row. This may seem extravagant, but I had laid out to put on more than three hundred pounds. The good wife vetoed the proposition by simply saying that, if I set the drill for any such amount, when I was gone to Lansing she would tell the boys to change it to one hundred pounds. She was right; as usual. If I had put on three hundred pounds per acre, more would have had to be purchased, or borrowed, for the corn to grow on. It's simply immense as it is. On good land about 150 pounds per acre in the hill is the proper amount. Superphosphate matures the corn from one week to ten days earlier.

As to varieties to plant, nearly every farmer suits himself. That's right, if he has a good kind. For all purposes the White Cap Dent is a good reliable kind to raise. I think the Leaming will yield more to the acre than any other kind, but it is almost too late a variety for this latitude. In central and southern Ohio it does splendidly. Great care should be taken in preserving seed corn. Corn frozen before the cob is thoroughly dried may germinate and grow, but it is not fit to plant. Pick the corn early, and dry it as soon as possible. Keep all winter from freezing if possible.

Seed corn well wintered will grow under very adverse circumstances. If your ground is well drained, you need have no fear of a cold wet spell for it will not rot your corn. Neither will dry weather spoil it. Good seed kept in a warm place will grow away. Even the cut worms have considerable trouble to get away with it. Sometimes it will grow up the second or third time after being cut by the worm.

Plant early. Our corn gets frost-bitten once in a great while in the spring, but more often in the fall. The fall nipping is the worst of the two. Husk your corn before cold weather, if you can, else you will have cold fingers.

Scales on the Farm.

Where anything like a good number of stock is bred, fed and fattened for market, scales can be made to pay a good interest on the investment. It certainly does not pay to sell anything by guess, and even with farm products it is safer to both buyer and seller to have everything weighed or measured rather than guessed at. But it is not altogether in the buying and selling that a good pair of scales can be made profitable.

The average farmer cannot now afford to manage his business by guess work. The margin of profit between the value of the grain, hay and other feed, is too small to admit of guess work. It is only by weighing not only the feed, but the animals, that we can know accurately that a fair profit has been realized. By weighing the feed we know when the feeding is commenced and then weighed again when they are sold, the amount of grain can be definitely known; and its value, taking the value of the feed from this, ought to give us the amount of profit. The manure that can be secured with proper care will be sufficient value to pay for the work of feeding and caring for the stock. There is no question that very often stock is kept upon the farm and is fed, and when sold they do not sell for a sufficient amount to pay for the food they have consumed.

It is easy to estimate, but it is somewhat difficult to always estimate correctly, and it is nothing more than natural that the farmer should want to consider that his work had been profitable. When hogs, cattle or sheep are fed with the products raised upon the farm, if a correct account is kept, and the amount of profit that is realized is determined, the scales must be used. It may take measure, callous, or any other class of goods the merchant sells. If the merchant considers it necessary to weigh and measure

every small item connected with his business, it is not equally as important that the farmer, whose work is generally on a larger scale so far as the items are concerned, should weigh and do his work with at least some degree of accuracy? It is guess work to feed stock to maturity without knowing except by guess how much feed has been supplied to them. No positive knowledge of what has been the profit can be known unless it, as well as the feed, is accurately weighed. This, with the advantage of being able to weigh at home any product that may be sold, will be found quite an advantage.

Prolonging the Life of a Cow.

A writer in the *Agricultural Gazette* (Ireland) says the actual average life of a cow is eight years, yet her productive life may be prolonged to twenty years. The best cow he owns is the thirteenth calf of her dam. He knows of an Ayrshire cow that gives 13 quarts of milk in a day when with her thirteenth calf, and when she was too old for age to be detected by her horns. He asks in view of these and other similar instances, why are cows useless at eight years old? A cow properly cared for is then at her prime, and may compare with a man forty years old. At such an age a man has twenty years of vigorous, useful life at least before him, and by husbanding his powers ten years more may be added. A cow may just as well add six years more to her eight, and will beyond a doubt if she is well used, and still yield a better profit to her owner than a four-year-old cow. Thus the productive life of a cow may be actually doubled by good care and usage. But how is this lengthened period of usefulness to be gained?

In the first place, longevity is a hereditary characteristic, and careful selection and breeding are required to secure it. Then constitutional vigor favors it. This is secured by thorough breeding and early training. The sound, healthy calf must be well cared for, well fed, and when she becomes a cow, the training and care must be continued and the cow's vital forces well nourished and husbanded. Exposure and irregular feeding, not to mention actual starvation during the winter season, which is far too common, tend greatly to shorten the useful and productive life of a cow. It pays better to preserve a good cow than to rear a second one; and if one lives sixteen years and has twelve productive years, she will have been worth more to her owner in the end than three cows eight years old would have been, for there will be ten fully productive years in the old cow's life against ten partially productive years in that of the young ones.

Keeping Sweet Potatoes.

The tubers should be dug after the first frost. They are generally ripe about that time. Examine some bruised specimens. If the wound turns to a dark or bluish color they are not ripe, but if the "milk" oozes out and dries over the wound, they are all right. Dig in fair weather, bruising them as little as possible, and do not expose them to rain or dew. Store them in crates or boxes in a dry place where the temperature is kept at from 50 to 65 degrees, and never allowed to go much below 45. A correspondent of *Southern Cultivator* recommends the following plan for southern localities, as one never known to fail: Smooth the ground where you wish to locate the bank. Put a layer of corn-stalks on the smooth surface as thickly as you can, and cross-lay with another layer of stalks. Spread over the stalks about four inches of pine straw or any other straw. Next, nail together four planks or boards, forming a hollow. Bore holes in each side of this tolerably thick; stand it on end in the center of the straw, and pile the potatoes around it. Put a layer of straw over the potatoes, and a layer of corn-stalks, setting on end, over it. Cover the stalks with dirt, spading it from close around the bank, thereby forming a ditch to turn the water from the potatoes. Be sure to let the top end of the boards extend a little above the top of the bank. Leave the top open until rain or cold snap comes, then cover with a piece of plank until the weather moderates. This hollow furnishes a channel through which air can readily reach the potatoes all around the center, and should be kept open as much as possible while the weather is moderately cool, but as winter approaches it should be kept closed. Potatoes always go through a sweat after being banked, and air distributed through them is very essential.

Agricultural Items.

Milk, it is said, makes tough, dry, hard pork, owing to an excess of nitrogen in the milk.

BUCKWHEAT requires land of medium fertility. All straw and no grain is apt to be the result where soil is very rich or fertilizers are used. Thirty bushels per acre is considered a fair yield.

Two fair grounds at Lancaster, O., are lighted by natural gas, and the racing was conducted in the evening, a circle of lights surrounding the track. The attendance is as good in the evening as by day, and the managers are laying up the shekels.

POLAND-CHINAS are evidently a favorite breed in Indiana. At a public sale in Kush County, October 1st, 108 head of March and April pigs were sold for an average of \$64.33. A yearling stud by King Tecumseh brought \$625; a boar pig by Osgood, \$200.

D. A. BARKER, of Genesee County, N. Y., says he has practiced trying every new kind of wheat as it appears. But he acknowledges that had it stuck to Clawson he would have raised more wheat and saved the money he spent for the high-priced seed.

THE New England Farmer says that in Reading, Vt., there are 4,000 acres of abandoned farming land to be bought for from \$1 to \$4 per acre. A 300-acre farm in Wadsworth County can be bought, buildings, sugar orchard, and plenty of timber, for less than \$4.

THE Kansas Farmers' Loan and Trust Company has collapsed. It had an alleged capital of \$500,000, and had invested over \$3,000,000 in farm mortgages in Kansas, Nebraska, Colorado and Dakota, the money being furnished by people in New England with a few thousands to invest. Much of the farm property is worthless, the boomers having deserted their farms, the building, gas vacated, and ruins, the company having accepted anything

from which they could rake in their two per cent commission.

THE editor of the Iowa *Homestead* says: "We have spent two months this summer in the study, among other things, of the small farmer, in almost daily intercourse with men who are trying to keep the wolf from the door by raising grain to sell on the market, and in looking at agriculture from their peculiar standpoint. We have insisted on knowing from these farmers the cost of their crops and the margin of their profits, and our conclusion is that they are raising corn for the cobs and oats for the straw, and have no use either for the cobs or the straw; or, in other words, they are living, and that is all. So far as farming is concerned, their only hope is in diversifying crops, raising better crops, economizing in methods and stopping wastes."

C. F. TORRENCE, one of the progressive farmers of the township, has adopted a labor-saving method of measures that we think most practical. He has made from pine saw boxes or measures which hold just a bushel. These are easily handled and may be carried anywhere easily. In picking apples, digging potatoes, husking corn, etc., they may be set handy and filled up, put into the wagon and emptied without the contents being handled over at all, and at the same time are accurately measured. These racks are inexpensive and will last always and are much stronger than baskets. We have never seen them used before, but think the idea an excellent one.—Portland Observer.

The Poultry Yard.

The "Boss" Chicken Coop.

As you are always inviting your readers to give their experience, I thought I would give you a description of my way of making coops when chicks are raised by the "old hen process." I take sugar barrels, and hollow out a place for the barrel to lie in, thus sink the barrel on its side, four inches below the surface. Throw the dirt that has been removed into the barrel, and enough more dirt to make the barrel at least one-fourth full. This will make a level dirt floor, and give a great deal larger space to biddy and the chicks. For slats I use laths, cut in two, one end of each place sharpened and driven into the ground, and the other end nailed to the edge of the barrel. Place the next coop far enough from the first to leave a space of, at least, two feet between the barrels, and the next about the same distance from the second. After placing two or three in a line, over with three boards, placing the two outside boards on first, and the middle one on last, and over the crack between the two. These will keep the coops dry and the space between the coops will make a shade for the chicks. The dirt floor makes a dust bath, and keeps the coop from becoming foul. It can be easily removed, and fresh dirt put in, and, being in, the barrel always keeps dry, no matter how much rain. This I consider one of the principal advantages. During the month of June, so far, we have had a very great amount of rain, and the ground was soaked most of the time, yet I have lost no chicks in these coops. The sugar barrels cost ten cents each here, being cheaper and better than flour barrels, as they are larger. By covering with the boards they are kept from the direct rays of the sun, and will last easily two seasons, when they may be used for droppings. I have White Wyandottes, eight weeks old, weighing one and a half pounds, and they were raised in these coops.—Poultry Keeper.

NONSENSE, says the *N. Y. Tribune*, is written about alleged extra profits of distinct breeds of poultry. For broilers, chickens or eggs, a mixed flock, properly cared for, will bring as good return as thorough-breeds. Of horses it is said that "the breed is half in the manger"; and the same truth applies to poultry. Let me emphasize the remarks: Take care of your flock, however mongrel. Exposed birds are no more needed than costly fixtures. Warmth, proper feeding, exercise—these things rigidly administered, will return better interest on the investment than breeds poorly cared for, however great favorites they may be.

THE *Poultry* gives the following as the reasons for infertile eggs: Too many fowls are crowded into one run or yard, depriving them of sufficient exercise and green food; too much condiment and sloppy food; introduction of cocks that are too old or worn out, or that never were any good (this point should be ascertained early in the season); too much inbreeding, which not only increases the number of infertile eggs, but makes the fertile ones less liable to hatch, and gives many delicate chicks, and consequently, as many delicate fowls. Those who have paid high prices for eggs, only to have them prove infertile, will be grateful if dealers will pay more attention to these points and guarantee a greater ratio of fertile eggs.

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Horticultural.

THE OUTLOOK FOR APPLES.

The advance in the price of this fruit has awakened new interest among the farmers of Michigan in their orchards. It has been seldom in the past ten years that the average farmer has had a fair margin to his own favor, and the use of land, original cost, etc. But this season very fortunately the situation has changed, and many farmers will receive more for their apple crop than for their wheat. It is fortunate because some crops were very nearly failures this season, and the financial returns from the orchard will go far, in many cases, to make the season a fairly prosperous one.

A great many farmers have already disposed of their crop; but some are yet holding, and for their benefit we give what information we can glean of the present condition of the market, and its probable course in the future.

The markets, east and west, are presently filled with the most undesirable fruit—such as early fall varieties which must be disposed of at once, and the windfalls and culls which in ordinary years find their way to the elder mill. There is therefore a surplus of this class of fruit, and it brings low prices as compared with well packed fall and winter fruit, free from damage by insects. In this market it is possible to get this low grade stock at from \$1 to \$1.50 per bushel, and they are well sold when these figures are realized. Undoubtedly they pay the owner better at these figures than what could be got for them in any other way. This glut of undesirable stock, however, has its influence upon the value of choice fruit. Cheapness appeals so strongly to that weak spot in man, his pocket, that it carries the day with the mass of those who think a poor article at a low price is cheaper than a good one at a fair price. Thus we see a poor class of fruit selling at \$1.50 per bushel, while good fruit can be had at \$3, which is actually worth double what the first is. As long, therefore, as there is so much low grade stock coming forward, it will be good business sense to hold on to choice fruit. When the run of low grade fruit is over, there will be better opportunities to get a fair price for well packed late fall and winter apples. At present \$2.25 is the best price obtainable in this market. It would not be surprising to see such fruit bringing \$3 per bushel by Thanksgiving Day.

The eastern States, which generally supply a large per cent of the apples for export, are this year unable to meet the demands of their home markets, and Michigan's crop of this season being large, and of unusually good quality, she is, and will continue to be, relied upon to furnish much of the fruit for export.

In New York city the market is in much the same condition as our own. There is an abundance of ordinary fruit, which is selling as low as here, but good stock brings a fair price, and will do better when the rush of common stock is over. There is a fair demand reported for export, and stock is firm, while the lower grades are rather difficult to dispose of. The following will give an idea of the prices prevailing there:

Apples, King, per bushel	\$2.50
Apples, 2 to 3 per bushel	\$2.50
Apples, Full Pippin, per bushel	\$2.50
Apples, 5 to 6 per bushel	\$2.50
Apples, 7 to 8 per bushel	\$2.50
Apples, 9 to 10 per bushel	\$2.50
Apples, 11 to 12 per bushel	\$2.50
Apples, 13 to 14 per bushel	\$2.50
Apples, 15 to 16 per bushel	\$2.50
Apples, 17 to 18 per bushel	\$2.50
Apples, 19 to 20 per bushel	\$2.50
Apples, 21 to 22 per bushel	\$2.50
Apples, 23 to 24 per bushel	\$2.50
Apples, 25 to 26 per bushel	\$2.50
Apples, 27 to 28 per bushel	\$2.50
Apples, 29 to 30 per bushel	\$2.50
Apples, 31 to 32 per bushel	\$2.50
Apples, 33 to 34 per bushel	\$2.50
Apples, 35 to 36 per bushel	\$2.50
Apples, 37 to 38 per bushel	\$2.50
Apples, 39 to 40 per bushel	\$2.50
Apples, 41 to 42 per bushel	\$2.50
Apples, 43 to 44 per bushel	\$2.50
Apples, 45 to 46 per bushel	\$2.50
Apples, 47 to 48 per bushel	\$2.50
Apples, 49 to 50 per bushel	\$2.50

At Chicago there is a surplus of common stock, which is not in demand, while good stock is scarce, and would sell higher but for the weakening effect of a glut of the poorer grades. Good to choice fruit, such as Baldwins, Northern Spys and Greenings, sells at \$2 to \$2.50 per bushel, in car lots; common to good fall varieties are quoted at \$1.50 to \$2 per bushel; fancy table stock, even in size and well colored, brings \$2.50 to \$3 per bushel, and cannot always be had. The season has only begun, and from prices now ruling, and the fact established of a short crop in Europe and in most of the States of the Union, we think it fair to assume that good apples will command considerably higher prices before the winter is over.

PACKING AND SHIPMENT OF APPLES.

At the fourth annual meeting of the West Michigan Fruit Growers' Society, held at Paw Paw, Van Buren Co., Mr. J. C. Gaud, who has had a large experience in the packing and shipment of apples, was called upon to speak on that subject. He said he had had the best results by following a few simple rules. The apples should be ripe on the tree before picking. They should then be gathered before they drop or are blown off by the wind. It requires some experience and observation to know just when any one variety is ripe and ready to gather. If picked too soon they will wilt, destroying some of the crispness and the flavor of the apple. If left on the tree too long they drop or are blown off, causing loss. Autumn apples come into condition for picking all through the autumn season. Winter apples of different varieties do not all ripen at one time. Some varieties ripen early while other varieties should remain on the tree much later. Some varieties will drop off much more readily than others. Apples growing on slender twigs will hang much better than those growing on stout, short limbs. All these points the intelligent grower will understand by careful observation. He should study the habits of each kind of fruit grown by him. When any variety of apples is ripe and ready for gathering, place the fruit in barrels and put them into a dry, cool place and let them remain standing on end until ready for shipping. Then empty them out on straw or hay, and sort and repack in same barrels, putting in only perfect apples. Care should be used not to mix varieties. Place only one kind in each barrel and see that they are marked on the head of each barrel with the true name of the variety. In this manner you can first ship or sell the varieties that will keep a long time, and retain the good keepers after it desired. Care should be used in handling apples, to prevent bruising. The stems should always remain on the apples. Never draw your apples to market loose in the wagon-box. They

should be placed in barrels before leaving the orchard. Very much loss comes by improper handling and carelessness in picking. I ship to some special market and usually know beforehand what I am to have. Find a good market and ship only good apples. You will then get best prices.

B. G. Buell agreed with the speaker in manner of picking, but thought September 25 to October 13 the most favorable time for such work. His method for repacking is to place the apples on a table covered with blankets, then sort and repack. I have picked, packed and shipped apples immediately, and have kept them in barrels for some time, then repacked, sometimes heading up and shipping soon; have sometimes kept them several weeks after they had been repacked. I prefer the latter method. I head them when ready to ship. The average farmer is not an adept in handling and selling apples. Such would better sell to shippers direct. They know then exactly what they receive for them. This would be found best in the long run.

J. G. Rumsdell said the farmers that shake off their apples, pick them up without sorting, mix several varieties together, and draw them over a dusty and rough road in their wagon-boxes, six to eight miles, and then sell them for what they can get, are the men that ruin prices by throwing these cheap apples on the market. This fixes prices and then it is not so easy to raise them. There seems to be no way of reaching these men. They will not attend fruit growers' meetings, and many of them read few if any papers published in the interest of fruit growing.

N. H. Bangs: I am one of those average farmers. Farmers are not all well posted in growing and handling apples, neither are they so regardless of their own interest as to handle their apples in the manner described. Some of them may not be as particular as they should. We have been advised to sell our apples direct to buyers. When buyers learn to pay a fair price for good fruit well handled and delivered in sound condition, perhaps farmers will be quite willing to take more pains and deliver their apples in good condition. The dealer buys your neighbor's apples at low figures because they are in the bad condition mentioned, then tries to force the price down to the same figure for your first-class apples. There is little encouragement for farmers to handle with care.

PEACH ROT AND PEACH BLIGHT.

In the September issue of the *Journal of Mycology* published quarterly by the section of Vegetable Pathology of the U. S. Department of Agriculture, Mr. Edwin F. Smith contributes a paper on "Peach rot and peach blight," embodying the results of his observations in Michigan, Maryland, Delaware, and other peach growing sections of the United States. The loss from peach rot is often enormous, some years amounting to nearly the entire crop. At all times it is considerable. In 1838 on the Delaware and Chesapeake peninsula the loss during one week amounted to nearly half a million dollars. The loss this year was also serious.

The disease is due to a parasitic fungus which produces many small ash gray tufts on the discolored surface of the rotting fruit. These tufts consist principally of spore dust, which is carried by animals, washed by rains, or blown about, and causes the rot to develop in sound peaches whenever it falls upon them under proper conditions. The most favorable conditions for the germination of the spores and the rapid spread of the rot are hot and moist weather.

Dr. Smith thinks that this fungus also causes a very characteristic blight of the twigs and branches. In rainy seasons this is quite apt to occur, especially if the rotting fruits are allowed to remain upon the tree. He also finds that the fungus lives over winter in the decayed fruits, and in this way is re-produced year after year. In the spring these dry, wrinkled fruits, which have been left upon the earth or still clinging to the branches, swell and soften under the influence of repeated rains, and produce a new crop of spores exactly like those of the previous season. The practical importance of this discovery is very great. Could the blighted twigs and rotted fruits of one season be entirely destroyed the fungus would disappear and rot with it. The more nearly complete removal of infectious material be made the safer will be the succeeding crop. During the growing season the fungus produces innumerable spores and spreads its infection very quickly. For this reason, all rotting peaches should be removed from the trees and buried or burned, as soon as discovered. This can be done during the picking season without much additional expense; but it may frequently be necessary to do it before the fruit is ripe, if the grower would save any portion of it in a marketable condition. Finally, not a single rotted fruit should be allowed to winter over. All must be destroyed. If fruit growers would unite and follow this method systematically for a series of years, the losses from peach rot would be reduced to inconsiderable proportions. These remarks apply also to the rot of plums and cherries which is caused by the same fungus, known technically as *Monilia fructigena*.

CROCUS IN THE GRASS.

Some years ago I planted some crocus bulbs of various colors in an old hedgerow where the grass grows rankly. I did this just to prove the statement that I have more than once seen made, that this bulbous flower will not live among the herbage. The result of my experiment was that the bulbs flowered very well for three or four years, and would probably be in good condition there now, but that they were at length dug out by some boys. This seems to prove that crocuses may be classed with those bulbous flowers that are suitable for naturalizing in the grass. I found, however, that the rate of increase was very slow, but I think that this is the rule with bulbous flowers in the grass. It is noteworthy of daffodils, for instance, that while in gardens they soon grow into crowded clumps and need transplanting every now and then, they never do so in pastures. This is an advantage, as the bulbs always have enough room and so bloom regularly. Soil may influence the crocus to the extent of causing it to fall in some places among grass, but that this is not always the case I have now proved and in no position does the crocus look so much at home as amongst herbage.—*Vick's Magazine*.

The Idaho Pear.

The following authentic history of the Idaho pear was obtained from Mrs. Mulkey, who originated the pear, and authenticated by a party who was residing in the family at the time. The following article is taken from the Nov. 27, 1886, issue of the *Rural New Yorker*, and is the first introduction of the Idaho pear to public attention: "On October 26th, we received from Mr. John H. Evans, Lewiston, Idaho, some specimens of a pear. Mr. Evans writes us that the tree grows in the orchard of Mrs. Mulkey, of the above town, which is in the same latitude as Quebec, though the climate there is warmer. About 18 or 19 years ago, four seeds were saved from a fine oblong pear, resembling the Bartlett; all were planted but only one germinated, making a growth of about two feet the first year. It grew so thriftily, with such fine foliage, that it was resolved not to bud it. Next spring it was transplanted, and four years from the seed bore some fine fruit and has continued bearing ever since. It is about a month later and keeps better than the Bartlett, and is thought by all who know both to be fully its equal in all other respects. When received here the fruit was in color a bright golden yellow, with a red cheek covered with dots of a little darker hue. Others were more oblong but all were about as large at the apex of stem and as at the base or calyx end. There is no pear of this shape that we know of. It more nearly resembles an oblong apple in shape than any pear. It is a most remarkable, beautiful, distinct pear, which must have a future. It has never been our fortune to have a new fruit sent to us which strikes us so favorably as this."

The following is an extract from an article that appeared in the *American Garden*, December, 1887: "Among our numerous varieties of pear there are a few really desirable, excepting under favoring conditions, that growers and consumers alike will rejoice at one promising so favorably as does the 'Idaho.' Here follows an illustration of the pear—the shape is shown in the illustration, the color, when ripe, is a brilliant yellow, dotted with russet, the core is exceedingly small, while the thick, creamy white flesh is juicy, tender and very firm, and the whole with a delightful aromatic fragrance, somewhat suggestive of the quince. Altogether it is a distinct appearing and handsome fruit, the flavor is delicious, subacid and spicy. Compared with Keiffer, which is evidently of similar origin, namely, Chinese, it is far superior in quality to that variety. Its season is about one month after the Bartlett; and taking the few specimens sent east this season for a criterion, it is free from decay at the core and a first-class shipping variety."

We should add that the seeds are insignificant and by some it is called seedless, and the flesh has a smoothness and entire freedom from granulations. It and prove blight-proof it will be a treasure.

During the fall of 1887 specimens were sent to the Burlington County, N. J., Fair, weighing respectively 19, 21, 21 and 23 ounces. They were the largest on exhibition and attracted great admiration and won the highest award of the society, a fine medal.

Lifting and Planting Roses.

The time has arrived when the gardeners' attention will be drawn to the lifting and planting of roses. There are many readers of this journal who are neither gardeners themselves nor employ professional assistance, and yet have a garden in which they can grow a few roses, and as a vast deal depends upon the treatment at this time, we proffer some advice which we trust will be welcome. In order to have flowers good in both size and quality, it is necessary to prepare the ground in a right and proper manner, and to secure, if possible, strong bushes. To do this, early preparation is essential to success, to get the soil in good condition by the time they are planted. Some growers leave the preparation of the ground until it is time for planting the bushes; a great mistake on their part. To do justice to roses, an open but still somewhat sheltered position should be given them, but away from tall trees. The site having been decided upon, the next point under consideration is the soil, and, of course, this must be good. There are very few soils in the kingdom capable of growing either flowers, fruit or vegetables without the assistance of something stimulating, therefore, soil and manure will no doubt be required in most cases. Good turkey manure, which has been in stock twelve months, should be procured, if not at hand, and wheeled on to the ground, together with a liberal quantity of well decayed vegetable refuse, by all means use that with the rest. The ground should, in all cases, be trenched two spades deep, at the same time well mix the whole together, if possible. If this cannot be done, the manure should be placed as near the surface as is consistent with reason. When a piece of ground is trenched two spades deep, in fact in any class of digging, the soil is always raised considerably. Now if both trenched and planting are done together, or at least, almost together, it stands to reason that the soil cannot be in good condition, unless it is trampled considerably; then it might do, not unless. Still, it is best to do the trenching a month or so before planting, to allow the ground to sink as far as it will. Be sure that the soil is well broken up during the operation, or the ground will sink very uneven, and create unnecessary work afterwards. The months of October or November are the best for transplanting roses, and it very frequently occurs that many blanks are caused in collections owing to the deaths. In both cases the plants must not be replaced or filled up without adding some fresh soil and manure about the roots to encourage them to get established before winter sets in. In lifting roses from their present position and transplanting them in another, great care should be exercised. Their roots must not be injured, and further, their future place must be prepared for them before an attempt is made to remove the bushes. If everything is in readiness they will not suffer in the least in their removal, but if, after the plants are lifted they are allowed to remain out of the ground any length of time, and exposed to all the frosty or drying winds, it will assuredly tend on them long the winter is over. Care at this season of the year is an essential point to be observed by all, as upon it depends whether plants will live through the winter. As regards planting, most people know how this should be done, and it will therefore suffice to say that everything

should be firm about their roots, and after they are all planted, a layer of half decayed manure should be placed upon the surface as a protection to the roots from frost.—*Horticultural Times Eng.*

Perennial Vegetables.

Have you a spot in your garden devoted to the perennial vegetables? If not, now is a good time to attend to it. Rhubarb, or pie plant, as some prefer to call it, coming early in the spring, at a time when our palates are beginning to tire of the cellar vegetables of the previous season, has a most grateful taste and is welcomed by nearly one. It may be raised so easily that none who can spare the space for two or three hills should be without it. It delights in a deep, rich soil, well dug and constantly fed with slops, stable manure, old leaves spoiled in, or any other fertilizer which may be convenient. Throw the soapy water of washing day upon it, and in winter mulch with coarse manure. It will give good stalks for cutting the second year.

The asparagus is another perennial, and though looked upon as a vegetable which involves you in many difficulties in the establishment thereof, I have reason to believe that a much of this, like the culture of celery, is a popular error. Fall is by all means the best time to start an asparagus bed, unless the soil be very heavy, damp and undrained, and in the latter case some provision should be made for taking off the surplus moisture at whatever time you plant.—*N. Y. Press*.

Secrets of Viniculture.

Those who are but imperfectly acquainted with the secrets of viniculture have a vague impression that the most potential and necessary thing for a vine-growing country is plenty of sun. That the sun plays an important part there can be no doubt; it is necessary to mature, but the soil is everything. And this is shown in the growth of the grapes producing the various clarets in France. In the Meuse districts the limits of the most famous vineyards are marked with strange arbitrariness. In one place grow the grapes that make the wine of Chateau Margaux or Lafite. This latter chateau belongs to the Rothschilds, having been purchased by them in 1868 for 4,000,000 francs, or about \$300,000. A hand's breadth outside it vines truly grow, but produce wine of quite a different quality.

What the vine likes is that stony ground scorned in the parable of the seed scatterer. It loves above all things the crevices of a rock, into which its roots penetrate, hardening the plant and imparting a special flavor to the wine. A Moser wine taster can tell at once what sort of ground a bottle of wine has been grown in. A stony sub-soil imparts a distinct fineness of taste to the wine, while that grown on a stony layer is marked by greater body and vinosity. Those who have seen the vineyards along the banks of the Rhine can well believe this, as the vines in many places seem to be growing on the bare rock, out of which here and there terraces seem to have been actually hewed. Coming to our California vines, there is still much to be hoped for in the choice of grape and method of vintage and manufacture in order to secure a wine that will improve with age and retain its bouquet. California can only produce California wines, not French clarets or Spanish sherries or Portuguese ports, and the sooner this fact is admitted more generally in the names of the wines the better for the California product, which has vast possibilities, and will it is to be hoped, displace beer and whiskey.

Horticultural Items.

A THIRTY-ACRE SWAMP at Highland Light, Mass., is to be converted into a cranberry meadow, at a cost of \$10,000.

CALIFORNIA WINES were awarded a grand prize at the Paris Exposition. A number of special exhibitors won gold medals. A grand prize is awarded for the best goods of a class shown by any exhibitor from any country.

OCEANA County carried off the honors on exhibits of peaches and plums at the Detroit Exposition. The awarding committee made special mention of the excellence of the exhibits, which were indeed remarkably fine.

A FRUIT drying establishment at Benton Harbor has an automatic apple parer which will pare seventy bushels of apples per day, requiring the attention of but one person. Several of these machines are in use at the works.

FRANCE and Germany are very particular about the canned goods sent them from this country. They prefer stock packed in cans soldered on the outside. Eastern firms in our own country are beginning to insist on having stock furnished in similarly made cans.

THERE was great talk this summer of concentrating the handling of the Florida orange crop into the hands of a syndicate. The scheme read well on paper, but in practice proved an utter failure. Such perishable goods never catch the millions which are always ready to be invested with anything that promises good returns.

THE reasons for the differing reports as to the effect of using London purple as an insecticide on peach and plum trees, has been found at last in the varying quality of the purple. London purple is a by-product from the manufacture of aniline dyes, and often contains enough soluble arsenic to occasion great damage. Paris green is safer, being less variable in its composition. A rain following close upon the spraying often causes injury, particularly with London purple, which contains more soluble arsenic.

THE report of the Summit County (Ohio) Horticultural Society says grape growers should never overlook the fact that there can be no rot where the fruit is protected from dew and rain. Where vines are trained on a building under a cornice the fruit never rots. A wide board nailed over the trellis, in so far as it protects the fruit from dew and rain, prevents the rot. A strip of calico, muslin or other fabric has the same effect. The liability to rot is also diminished in proportion as the vines are high. There is always less rot at the top than at the bottom of the trellis. Where vines are allowed to grow over the branches of trees with little or no care, there is but little rot, and the vines are remarkably healthy and productive.

It is said the dried fig of commerce, called the Smyrna fig, is grown in the valley of the Meander, in the district of Aiden, Asia Minor, and when fresh is not palatable, but when dried is delicious, far exceeding in quality the

products of any other districts. In the other districts the figs are good while fresh, but lose their color and flavor when dried. The trees in Aiden live to a great age, and when 15 years old will bear from 100 to 150 pounds of fruit. They are in their prime at 100 years, and then bear from 250 to 350 pounds of figs. There are two crops in a year, and the figs stay on the trees till they begin to wither and dry; they are then quartered, dried in the sun a few days and then sent to Smyrna to be packed for export.

Apiarian.

Compelling Bees to Work.

As soon as the first yellow tint begins to show on the oats the village beekeeper of the borderland thinks it time his skeps were away to the moorland, for then the flower harvest is almost over and the heather is coming into bloom. He has been making preparation for months in anticipation of an event of importance to his pocket and associated in his mind with mystery and romance. A few beekeepers are so fortunately placed that they can convey the skeps by train and it was once common to employ donkeys. The long cart borrowed from a neighboring farmer is now most generally used. It is brought down after dark, when the bees, after the completion of their day's work, have retired for the night and the owner has folled their egress with a piece of perforated tin. Where a number of villagers have each a hive or two they combine to employ several carts and the scene before departure is very animated.

When all is ready the procession moves off along the dark road, rendered darker by the elms on either side, but the villagers let it be as late as possible for the sake of coolness, and also that day may break before they come to the path perilous among the hills. At dawn the summer angel, as he is called by the first light on the hill stream and wondering as he does so whether rain or sunshine is portended by the nightcap on the hill and the ribbons of mist waving along the pine tree, will catch a view of the carts slowly rumbling along a wheel track midway between the woody slopes and the water. Men and horses all looked tired and dragged, but their journey is well nigh at an end. A few miles more and the welcome salutations of the she dogs in the glen which strangers so seldom will announce the end of their labors. In a very brief space of time the hives are placed on their stands within a disused sheepfold and the bees are let out.

After one sweep round, in which they seem to take their bearings, the industrious and business-like insects settle down to work, and within an incredibly short space of time they may be seen returning with their burdens. It is usual to pay the shepherd—half a crown or so—to keep an eye on the skeps, and I have counted from six hundred to one thousand under one man's charge. The flight of heather, extending over many thousands of acres, is visited, by the convey, and old hands will tell at once by the very hue of it if there is honey; if the night has been dewy, however, and the morning balmy, one's boots are whitened with pollen while walking through it. On such a day the stream of bees from the fold to the heath is so large and continuous as almost to darken the air, and so intent on their work are they that, like men in a hurry, they will hustle against any obstacle, with this difference, however, that he who happens to be the obstacle is sure to be stung.

Yet it requires all their industry, for the harvest is a very brief one. When the autumnal winds are driving before them the first shower of withered leaves, when the harvest wages have been paid, and the kirk door held, when the children are beginning to look for blackberry and hazel nut, the beekeepers will come back for their hives. Gladly they will travel home in mist and rain if the season has been cold and the skeps are empty, but far other will they fare if the season has been good and twenty pound tops are common, while there are top sweaters that will turn the scale at forty.—*Scotts Observer*.

Robbers in the Hive.

Beekeepers are always on the alert to devise means to prevent robbing. G. M. Doolittle, in *Gleanings*, gives his experience in excluding the foragers. "Musk, spirits of turpentine, kerosene oil, etc., have all been recommended to stop robbing; but I do not believe that, after robbing is well under way, any of them will do any good. When robbers first attack a hive, a few drops of kerosene oil or spirits of turpentine sprinkled against the hive and on the alighting board, a few inches from the entrance, will often cause robbers to leave in disgust. However, I find that the best way is to contract the entrance at all times when robbing is likely to occur, so that but few bees can pass at a time. I have also tried leaving a pane of glass up before the entrance, as recommended by some of our English friends across the water, where robbers seem determined to enter any hive, but I do not see that it is in any way superior to contracting the entrance, while it seems to bother the bees of the hive much more. If robbers have really got possession of the hive, throw a sheet over it, so that those on the outside can not get in; and if the colony is good for anything, they will soon drive out those already in, when the sheet is to be turned so as to get rid of them. Leave the sheet on till near sunset, when it is to be taken off so as to allow the few bees out to get into their hives. Fix the entrance so that out one or two bees can pass at a time, and the next morning they will take care of themselves. Something much better than the sheet for stopping robbers is a beehive, to be set over the whole hive; and where the apiarist has such a tent, it is hardly necessary for me to tell him to use it in place of the sheet."

Cataris is caused by scrofulous taint in the blood, and is cured by Hood's Sarsaparilla, which purifies and enriches the blood and gives the whole system health and strength. Try this "peculiar medicine." It is prepared by C. I. Hood & Co., Lowell, Mass.

Nothing Succeeds Like Success. I have been successful in the production of Comb Honey for the past ten years. How I produce Comb Honey, briefly explained, is the method I pursue. By mail, 5 cts. per copy; per 10, \$3.00. My illustrated price list of General Supplies, Bees and Queens, free. Address GEO. E. HILTON, Fremont, Mich.

GREAT OFFER!

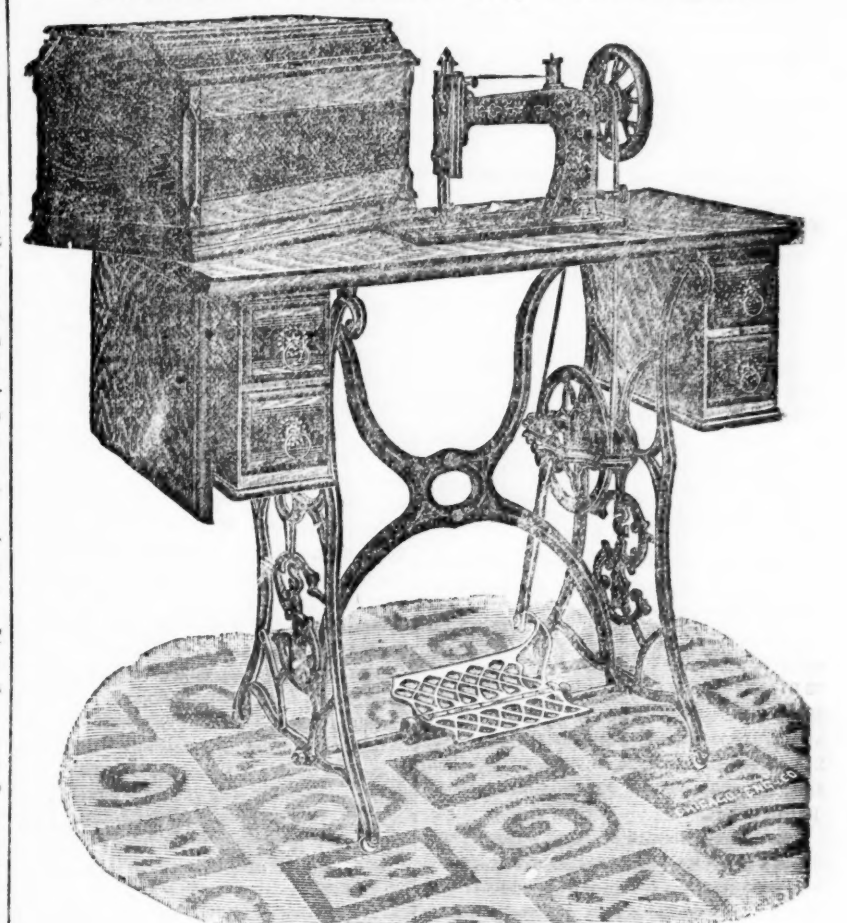
Pianos—\$35—Organs. Direct from Factory at Manufacturer's Prices. No such offer ever made before. Every man his own agent. Examine in your home before paying. Write for particulars. Address: The T. Swager & Son Pianos and Organs, BEAVER FALLS, PENNA.

Sewing Machines!

ONE - THIRD PRICE!!

THE NEW AND GREATLY IMPROVED HIGH-ARM SINGER

The Finest and Best Made Machine of the Singer Pattern in the market.



HIGH-ARM IMPROVED SINGER.

With each of these machines we furnish one Ruffler, one Tucker, one set Hemmers, one Foot Hemmer, one Sew Driver, one Wrench, one Oil Can and Oil, one Gauge, one Gauge Thumb Screw, one extra Thread Plate, one extra Chuck Spring, one paper Needles, six Bobbins, and one Instruction Book. These articles are all included in the price named.

Bear in mind that these machines are thoroughly made and of first-class workman ship, and

EVERY MACHINE WARRANTED for FIVE YEARS.

These machines furnished to subscribers of the FARMER for

\$18.00!

Which includes also a year's subscription to the paper. There never was a high-arm machine sold before for less than three times this price.

These Machines Guaranteed for Five Years.

Purchaser pays freight, which runs from 65c. to 90c. on each machine, according to location of purchaser.

CASH MUST ACCOMPANY ORDERS.

Samples of these machines can be seen at this office. Address orders to

GIBBONS BROTHERS, DETROIT, MICH.

OUR NEW MACHINE "THE MICHIGAN."

Manufactured expressly for the MICHIGAN FARMER.

We have Tested all the Machines Manufactured and finally decided on the MICHIGAN as the Simplest in Construction, the Finest in Finish, the Lightest Running, and doing the Best Quality of Work. This decision we arrived at for the following reasons:

1st. All the parts are made of the finest metal, and with the utmost care and precision, and are subjected to the test of an accurate steel gauge, before being assembled.
2d. It is simple in construction—having few parts so complicated, and not liable to get out of order.
3d. It is a high arm, giving ample room for any kind of work.
4th. It has a self-setting needle, thereby saving the operator much annoyance. It is very light-running, and not tiresome to the operator.
5th. It does a wide range of work, either fine or coarse, and both equally as good.
6th. It has the Fish Patent Loose Balance Wheel, nickel-plated—with Patent-Stop Motion, the most complete arrangement of the kind in use.
7th. All the running parts of the machine subjected to wear, are made of the finest steel, case-hardened, thereby insuring great durability.
We furnish with each machine a complete set of attachments, put in a velvet-lined case, consisting of one Ruffler, one Tucker, one Quilter, one Shirrer, one Braider, one Thread Cutter, one Binder, and one set of Hemmers; also the following accessories: Six Bobbins, one Paper Needles, one Foot Hemmer, two Sew Drivers, one Gauge, one Gauge Thumb Screw, one extra Thread Plate, one Oil Can and Oil, and one Instruction Book.

EVERY MACHINE WARRANTED.

Highly Ornamented Head, Nickel-Plated Balance Wheel, Drop-Leaf Table of Oil-Polished Walnut, Gothic Box Cover with French Veneered Panels, Case of Two Drawers and 1212 of Table, with Locks and Veneered Front.

These machines will be furnished to subscribers to the FARMER for

\$21.00,

Which Includes a Year's Subscription.

A Guarantee from the manufacturer for five years is sent with each machine.

CASH MUST ACCOMPANY ALL ORDERS.

The purchaser pays the freight, which will be less than \$1.50 to any part of the State. A sample of this machine can be seen at the FARMER OFFICE. Address all orders to

GIBBONS BROTHERS, DETROIT, MICH.

MICHIGAN FARMER.

—AND—
STATE JOURNAL OF AGRICULTURE.

GIBBONS BROTHERS.

—SUCCESSORS TO—
JOHNSTONE & GIBBONS, Publishers.

No. 40 and 42 West Larned St.
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EASTERN OFFICE: 21 Park Row, New York.

P. B. BROMFIELD, Mgr.

CHANGE OF ADDRESS.

Subscribers wishing the address of the Farmer changed must give the name of the Postoffice to which the paper is now being sent, as well as the one to which they wish it sent. In writing for a change of address all that is necessary is to change the address on Michigan Farmer from Postoffice to Postoffice. Sign your name in full.

DETROIT, SATURDAY, OCT. 26, 1889.

Price Five Cents Entered at the Detroit Postoffice as second class matter.

STOCK SALES IN MICHIGAN.

The following dates are claimed by Michigan breeders for sales of stock:

Nov. 6—Adam Dill, Milford, registered Merino sheep and thoroughbred Essex variety.

Thomson, auctioneer.

WHEAT.

The receipts of wheat in this market

the past week amounted to 107,831 bu., against

203,613 bu. the previous week, and 170,122

bu. for the corresponding week in 1888. Ship-

ments for the week were 116,173 bu., against

111,550 bu. the previous week, and 117,733

bu. for the corresponding week last year. The

stocks of wheat now held in this city

amount to 207,795 bu., against 255,090 bu.

last week, and 1,336,160 bu. at the corre-

sponding date in 1888. The visible supply

of this grain on Oct. 20 was 22,057,370 bu.,

against 19,838,919 bu. the previous week, and

32,973,370 bu. for the corresponding week in

1888. This shows an increase above the

amount reported the previous week of 2-

218,451 bushels. As compared with a year

ago the visible supply shows a decrease of

10,915,000 bu.

The market has ruled weak since Sat-

urday last, and was weaker a day later, and

recovered a part of its loss in New York and

Chicago. We consider wheat at present

prices good property to hold. With the out-

crop, a sharp advance in wheat is among the

probabilities of the near future. It looks as if

the market could not help improving. If general

business keeps good, and the tightness in

money passes away, if funds were plenty

now we have an idea speculators would have

taken hold of the market and "boomed" it be-

fore this. The present decline may be taken

advantage of to buy in large supplies, which

will be nearly certain to pay purchasers a

good margin of profit. Yesterday New York,

Chicago and St. Louis all advanced, closing

firm.

The following table exhibits the daily closing

prices of spot wheat in this market from

October 1st to October 25th inclusive:

	No. 1	No. 2	No. 3
Oct. 1	81 1/2	79 1/2	77 1/2
2	81 1/2	79 1/2	77 1/2
3	81 1/2	79 1/2	77 1/2
4	81 1/2	79 1/2	77 1/2
5	81 1/2	79 1/2	77 1/2
6	81 1/2	79 1/2	77 1/2
7	81 1/2	79 1/2	77 1/2
8	81 1/2	79 1/2	77 1/2
9	81 1/2	79 1/2	77 1/2
10	81 1/2	79 1/2	77 1/2
11	81 1/2	79 1/2	77 1/2
12	81 1/2	79 1/2	77 1/2
13	81 1/2	79 1/2	77 1/2
14	81 1/2	79 1/2	77 1/2
15	81 1/2	79 1/2	77 1/2
16	81 1/2	79 1/2	77 1/2
17	81 1/2	79 1/2	77 1/2
18	81 1/2	79 1/2	77 1/2
19	81 1/2	79 1/2	77 1/2
20	81 1/2	79 1/2	77 1/2
21	81 1/2	79 1/2	77 1/2
22	81 1/2	79 1/2	77 1/2
23	81 1/2	79 1/2	77 1/2
24	81 1/2	79 1/2	77 1/2
25	81 1/2	79 1/2	77 1/2

Sales of No. 2 white were made at 73 1/2

per bu., and of No. 3 white at 64 1/2.

The following is a record of the closing

prices on the various dates in futures each

day during the past week:

	Oct. Nov.	Dec.	Jan.
Saturday	80 1/2	78 1/2	76 1/2
Sunday	80 1/2	78 1/2	76 1/2
Monday	80 1/2	78 1/2	76 1/2
Tuesday	80 1/2	78 1/2	76 1/2
Wednesday	80 1/2	78 1/2	76 1/2
Thursday	80 1/2	78 1/2	76 1/2
Friday	80 1/2	78 1/2	76 1/2

The London Miller, in a long review of

consumption; and for the eight weeks end-

ing Sept. 25 the receipts are estimated to

have been 5,336,440 bu. more than the con-

sommation. The receipts show an increase

for these eight weeks of 4,482,712 bu. as

compared with the corresponding eight

weeks in 1888.

Shipments of wheat from India for the

week ending Oct. 12, 1889, as per special

cable to the New York Produce Exchange,

aggregated 540,000 bu., of which 340,000

bu. were for the United Kingdom and 200-

000 bu. for the Continent. The shipments

for the previous week, as cable, amounted

to 380,000 bu., of which 300,000 went to

the United Kingdom, and 80,000 to the

Continent. The shipments from that coun-

try from April 1, the beginning of the crop

year, to Oct. 12, aggregated 14,320,000 bu.,

of which 9,840,000 bu. went to the United

Kingdom, and 4,480,000 bu. to the Con-

tinent. For the corresponding period in 1888

the shipments were 23,760,000 bu. The

wheat on passage from India Oct. 1 was

estimated at 1,765,000 bu. One year ago

the quantity was 3,272,000 bu.

The Liverpool market on Friday was

quoted quiet, with light demand. Quota-

tions for American wheat were as follows: No. 3

winter, 65. 91. 65. 101. per cent; No. 2

spring, 74. 104. 75. 134. California No.

1, 74. 40. 75. 54.

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The

RED ROSES.

Dear me, let me see, I have just received a box of red roses. I like them very much. I will send you a few. I hope you will like them. I will send you a few. I hope you will like them.

How rich and red they are! How sweet! Like those fair blooms that used to grow in my garden. I will send you a few. I hope you will like them. I will send you a few. I hope you will like them.

My mother's fingers twined them round. The clustering curls that fell unbound. My father smiled to see. Ah, love me love me, darling mine! I lost their love in winning thine. I lost them, finding thee.

It seems, dear heart, but yesterday We met in your lone country way. And I loved in the lane. Love struck its magic hour that noon. Love set our pulses to a tune. Of mingled joy and pain.

How faint we were to learn the song! Though all too roughly flowed along. The course of true love's stream; For eyes that never met again. Looked only on thy modest worth. Then faded our happy dream.

I found it hard to choose between. Thy heart, that I had loved so true. And thine, that I had loved so true. And thine, that I had loved so true. And thine, that I had loved so true.

So tender and so true. And thine, that I had loved so true. And thine, that I had loved so true. And thine, that I had loved so true. And thine, that I had loved so true.

Did not I love to count the cost? Thy love had paid me all I lost. Good measure, brimming o'er; And yet, this summer moon, Through tears, the house where I was born. The roses by the door.

Ab, love! thy love is like the flowers. It fills my life with sweet hours. With color and perfume; But if I pull the leaves aside, I find a grief I had not hid. A thorn among the bloom.

Nay, dearest, do not turn away. Then knowest any heart would say. That sometimes it would ache. Com where the churchyard grasses wave. And by thy grave, thy little grave. Red roses for my sake.

—All the Year Round.

THE GOOD OLD TIMES.

The Festive Cowboy Was Attentive Too.

Free with His Gun—How the Rope's

Popularity Destroyed That

of the Pistol.

"I reckon Western Texas and New Mexico

in their palmy days just handicapped

any other region in raising cattle and

and the cowboy was a popular figure

in the West. He was a popular figure

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THE RAT'S WORST FOE.

How the Ferret Attacks and Vanquishes Rodents.

A Deadly Duel Between One of the Clumsy

Weasels and a Pugnacious Rat—The

Wonderful Tenacity of the

Ferret's Hold.

Clearing rats out of several large buildings

by the use of ferrets recently started

some queer stories of the relations of the

ferret and the rat, which have excited the

curiosity of a retired rat-catcher—or rather

rat-exterminator—says the Philadelphia

Press. He is a man who has been successful

in the large cities of the country and

once had the honor of being employed by

the Government to clean out the United

States Treasury building at Washington.

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HOW TO BE ATTRACTIVE.

A Really Homely Woman May Be Most

Attractive to a Man.

There is an old saying that to be

beautiful one must never look in a mirror.

I remember reading this maxim in a fairy

tale book when I was a child, and I

interpret it as meaning that a woman

should not be so vain as to look at

herself too often. But I have since

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